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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,580	09/05/2003	Norihiko Hakushi	67162-020	9990

7590 05/20/2005

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EXAMINER	
LEE, DIANE I	

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/655,580	HAKUSHI ET AL.	
	Examiner	Art Unit	
	D. I. Lee	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-11 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 6-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinohara [US 6,523,755 B2, cited by the Applicant].

Re claim 1: A semiconductor memory device comprising:

a first memory (a flash memory 60) which is non-volatile; and

a second memory (RAM 10a, 10b) having random access function (see figures 1 and 11), the first and second memories contained in one package (multi chip package 110a, 100b) (see col. 9, lines 59+; and figures 12 and 13), and semiconductor memory capable performing internal data transfer between the first and second memories (see figures 1 and 11),

wherein the second memory has an internal data transfer control signal that controls the internal data transfer and an external transfer control signal that controls data transfer between an external CPU and the second memory (i.e., the operation of RAM 10a, 10b controls the destination of the data transfer by determining whether data sent from CPU 70 to be access to the flash memory 60 or directed to the pseudo-SRAM 29 of RAM 10a, 10b, see col. 4, lines 9+),

the second memory incorporates a controller (a flash I/F circuit and a bus controller circuit 17 combine) that controls data access to the first and second memories (see col. 3, lines 55+; and figures 1 and 11), and

when an access to the second memory requested from the external CPU during the internal data transfer (i.e., when the status 27 is set to busy state), the controller controls the internal transfer control signal so that the internal data transfer is suspend (i.e., the controller controls the data transfer between the RAM 10a and the flash memory 60 by selecting one of the memory to read or write, thus, the internal data transfer is clearly interrupted or suspend when the controller selects the pseudo-RAM 29 for data transfer is suspend).

Re claims 6-7: wherein the memory region of the second memory having a dual port function (i.e., connecting CPU and a storage flash memory 60) and is divided into plurality banks (plurality of registers and buffer, for example, see figures 1 and 11).

Allowable Subject Matter

5. Claims 2-5 and 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: the best prior art of the record fails to teach or fairly suggest the specific function of the

controller, such as outputting a wait signal to request the external CPU to wait for access when the internal data transfer is suspended, resuming the internal data transfer when CPU doe not access the second memory for a predetermined period during suspension, storing a bit that indicates a command for the suspension of the internal data transfer from the external CPU, and automatically transferring predetermined data stored in the first memory to a predetermined region in the second memory when the power of the semiconductor memory device is turned on, as set forth in the claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Takahira [US 4,992,651], Ting et al. [US 6,515,929], Takeuchi et al. [US 2003/0156489], and Moriy [EP 632 463 A2] disclose a semiconductor device with an access controller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is (571) 272-2399. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. I. Lee
Primary Examiner
Art Unit 2876